Original Prod

CLARK FORK/PEND OREILLE SUB-BASIN ASSESSMENT

AND

TOTAL MAXIMUM DAILY LOADS

Hydrologic Unit Codes 17010213 & 17010214

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Introduction to the TMDL Process

Section 303(d) of the Clean Water Act (also called the Federal Water Pollution Control Act) directs States to identify waters for which the existing effluent limitations required by discharge permits are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

What results from this identification requirement is a list of impaired waters in the State which do not fully support the indigenous populations of shellfish, fish and wildlife. This criteria has been further elaborated on by the State of Idaho to include beneficial uses of these waters enjoyed by everyone. These include: domestic water supplies, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, and aesthetics.

When these uses are impaired the Clean Water Act directs the States to develop a plan for recovery of these uses. The method to be used for this recovery action is to establish maximum amounts, also called "loads", of pollutants that can be added to the water while still supporting all of its beneficial uses. If the water is impaired it means that this load of pollutant(s) has been exceeded and needs to be reduced.

The Idaho Water Quality Standards requires that the 1996 Waterbody Assessment Guidance be used, in addition to other available information, to determine if beneficial uses are fully supported. Often times the data used for the Waterbody Assessment process is the only information available. This is the case with many of the wadable streams in this sub-basin assessment. Idaho is in the process of revising this guidance. When finalized, the streams in this sub-basin assessment will be re-evaluated to determine if their support status has changed due to the new guidance. If previously full support streams are determined to be impaired, a TMDL will be written for them.

For impaired waters, DEQ, using the best available information, determines a "total maximum daily load", TMDL for short, for each pollutant of concern in the impaired water. For example, DEQ determines that a target load for sediment pollution in stream "X" should be 0.5 tons/mile, where the existing load has been calculated at 1 ton/mile of stream. The target value, which is where we want to get to, is an estimate of the level of a pollutant that can exist in a waterbody yet still support all of its beneficial uses. In our example, if the load of sediment is reduced by half we predict at that point impaired uses will be recovered. Error of this estimate for stream "X" was 25%. To compensate for this margin of error, 25% is subtracted from the target load as the margin of safety. This gives a final target load of 0.375 tons/mile. High values for margins of error indicate that little information was available on the sub-watershed and gross assumptions had to be made in calculating existing loads and target loads.

TMDLs in this document are of the type called "phased TMDLs". This type of TMDL allows DEQ to re-adjust the values for existing and target loads based upon new more precise information obtained after the TMDL was approved.

After the TMDL has been written and approved by the U.S. Environmental Protection Agency, the Clean Water Act directs the states to develop an implementation plan. These are on-the-ground action plans which will help recover the lost beneficial use(s). Continuing the previous example of sediment pollution, some implementation plan provisions might be to stabilize cut slopes, unplug culverts, redirect stormwater, and gravel or pave road surfaces in certain critical areas of the sub-watershed. These non-point source recovery efforts are voluntary for private landowners unless they are incorporated into existing regulatory programs, such as the Forest Practices Act, County stormwater ordinances, etc. which the landowner may encounter.

Another element of a TMDL plan is to monitor on a regular basis to determine if restoration work in the watershed is helping, and to see if beneficial uses have been restored. If the use is not recovered after implementation of the TMDL, it is revised and implemented again. After the water recovers its beneficial uses it is removed from the "303(d) list" of impaired waters.

EXECUTIVE SUMMARY

The Pend Oreille portion of this sub-basin assessment examined eleven streams, one major river, and two lakes. Of the eleven streams, nine were water quality impaired and required load allocations, primarily for sediment. These streams were upper and lower Cocolalla Creeks, North Fork of Grouse Creek, Hoodoo Creek, Caribou Creek, mainstem Grouse Creek, Fish Creek, Gold Creek and the Pack River. The Pend Oreille River assessment was inconclusive. Cocolalla Lake was found to be impaired due to low dissolved oxygen levels, resulting in load allocations for phosphorus for the lake and its tributaries. The Pack River has nutrient load allocations for nutrients as well as sediment. The Pend Oreille Lake will have a near shore nutrient TMDL (anticipated completion in December 2001) and a voluntary border nutrient agreement with Montana to protect open water quality from degradation.

The Clark Fork portion of this sub-basin assessment was tabled until its scheduled due date in the year 2004. Insufficient time to complete the assessment and the prospect of more data available three years from now drove this decision.